CONTACT SERVER

BACKGROUND OF THE INVENTION

1. Technical Field:

The present invention generally relates to a method for real time dissemination of information and in particular financial information. Still more particularly, the present invention relates to a method for delivering real time stock quotes.

2. Description of the Related Art:

It has long been recognized that access to timely information regarding current conditions in the various commodities and financial markets is essential to successful and profitable trading and investment. Many complex investment strategies require precise and careful timing of specific transactions in response to fluctuating market conditions. This is particularly true in today's fast-moving markets where the ability to respond quickly to changing market conditions may mean the difference between substantial profits or devastating losses. Many investors rely heavily on stock quotes when implementing their investment strategies. These investors get their quotes from a brokerage company. A successful brokerage company must be able to provide up the second stock quotes as accurately and efficiently as possible.

Currently, stock quotes are obtained when NASDAQ, the New York Stock Exchange and all other exchanges send various stock quotes to a field vender such as SNP, Bloomberg or Comstock. The field vender collects the data from all the sources, parsers the data, and multiplexes it to a quote server application at a rate of about 1,000 - 2,000 packets or quotes per second. The quote server is located in a regional brokerage office such as TradeCast or Merrill Lynch. The quote server has its own database and keeps track of the history of each specific stock quote. If the stock quote is not in the database, the quote server adds the stock quote to the database. If the stock quote is already in the database, then the quote server updates the database. Next, the quote server checks to see if a registered user has requested that particular stock quote. Most brokerage houses use a subscription based system. If one work station or trader registers a particular stock quote, then every time the tick or quote comes in, the trader gets an update on that stock quote. If numerous customers are looking for a stock quote, then it takes time to send the stock quote to all the requesting customers. If this process takes too long, the system can miss some of the stock quotes from the field vender.

Currently, the system is a closed loop. If the system spends more time delivering stock quotes, then the system must spend less time getting stock quotes. This can cause the system to miss stock quotes and not have current data. When the quote is not current, investors do not have the reliable information needed to make split second decisions.

One solution is to make a cache to hold the data. However, a cache is finite and if you make the cache too big then the customers are not going to get the latest quote or update. The goal is to optimize the processing.

Also, when new customers are added to the system, new quote severs must also be added. Currently, when 60 - 100 new customers are added, a new quote server must be added to ensure the system does not spend too much time delivering quotes and not enough time receiving quotes.

As a result there is a need for a way to optimize the system and make it quicker, more cost effective, and scalable.

SUMMARY OF THE INVENTION

It is therefore one object of the present invention to provide a method for improved precision and reliability for real time dissemination of information.

It is another object of the present invention to provide a method that can easily handle a large increase of users without having to substantially increase the number of servers.

It is yet another object of the present invention to provide a more cost effective method for delivering stock quotes to individual traders.

The foregoing objects are achieved as is now described.

According to one embodiment of the invention, a method for real time dissemination of information using a quote server to database and send requested information to a contact server and then using the contact server to send the requested information to users instead of one server receiving, data basing, and disseminating the information. By having to send the requested information only once, the quote server is able to spend more time receiving and data basing the information and less time distributing the information. This enables the system to serve 1,000 - 2,000 people per combination of the quote and contact server whereas the quote server alone can only serve approximately 60 - 100 people. The increase in capacity produced by the combination drastically reduces the number of machines needed and people required to operate and maintain the machines. Also, the increase in capacity allows for a large increase in users without having to increase the number of servers substantially.

The above as well as additional objectives, features, and advantages of the present invention will become apparent in the following detailed written description.

BRIEF DESCRIPTION OF THE DRAWINGS

The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself however, as well as a preferred mode of use, further objects and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings, wherein:

Figure 1A depicts a block diagram of a stock quoting system utilizing the contact server in accordance with a preferred embodiment of the present invention;

Figure 1B is a block diagram of a stock quoting system commonly used;

Figure 2A is a flow chart of a stock quoting system utilizing the contact server in accordance with a preferred embodiment of the present invention; and

Figure 2B is a flow chart of a stock quoting system commonly used.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the figures, and in particular with reference to **Figure 1**, a block diagram of a stock quoting system utilizing the contact server in accordance with a preferred embodiment of the present invention. Source of stock quote **102** can be any exchange that generates stock quotes such as the New York Stock Exchange. Source **102** sends the stock quotes to field vender **104**. Vender **104** parsers the data and multiplexes it to quote server application **106** at a rate of about 1,000 - 2,000 packets or stock quotes per second. Quote server **106** is located in a regional brokerage office such as TradeCast or Merrill Lynch. Quote server **106** can be any type of server capable of receiving and transmitting information. As shown in step **204**, quote server **106** checks to see if the data is a valid stock quote. Quote server **106** contains database **108**. Database **108** keeps track of the history of each specific stock quote. If a quote for a particular stock is not in database **108**, quote server **106** must add it. If the stock quote is already in database **108**, quote server **106** must update database **108**. Then, as shown in step **208**, quote server **106** checks to see if contact server **110** is requesting the particular stock quote. If so, then quote server **106** sends the stock quote to contact server **110**. As shown in step **212**, contact server **110** sends the quote to all trader **112**s who have requested that particular stock quote. If no trader **112** has requested a particular stock quote, then

contact server **110** does not request that particular quote from quote server **106**.

This is a vast improvement over the old system shown in **Figure 1B**. In the old system, when hundreds of trader **112**s would request a stock quote, quote server **106** would have to send each trader **112** the stock quote, shown in steps **208** and **214**. Because the system was a closed system, quote server **106** would have to finish sending each trader **112** a stock quote before it could move on to step **202** and read the data from field vender **104**. The system would spend more time delivering stock quotes, and less time obtaining stock quotes. Often quote server **106** would be delayed and therefore miss a stock quote or data packet from field vender **104**. Because quote server **106** did not have the most current stock quote, the database could not be updated and trader **112** would not have the reliable data needed to make split second decisions.

Those skilled in the art will appreciate that the present invention is capable of being implemented in a variety of forms. While the invention has been particularly shown and described with reference to a preferred embodiment, it will be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention.